IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Karen Duff	Examiner: Shin-Lin Chen
Serial No.:	10/620,840	Group Art Unit: 1632
Filed:	July 16, 2003	Docket: 1310.002US1
Title:	TRANSGENIC MICE COMPRISING A GENOMIC HUMAN TAU TRANSGENE	

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Restriction Requirement mailed on February 22, 2006, please consider the following.

In the Claims

The claims are as follows:

1. (Original) A transgenic mouse, the genome of the cells of which stably comprise a DNA molecule which comprises a human genomic DNA sequence comprising a human tau promoter and which DNA sequence encodes human tau, wherein the DNA sequence is expressed in the transgenic mouse so as to result in the transgenic mouse expressing six isoforms of human tau, wherein the transgenic mouse does not express endogenous murine tau, wherein the DNA sequence comprises one SrfI restriction site in the human tau coding region, and wherein the transgenic mouse accumulates filamentous tau in dendrites of hippocampal neurons.

2. (Original) The transgenic mouse of claim 1 which develops abnormal spinal cord pathology.

3. (Original) The transgenic mouse of claim 1 which has motor abnormalities.

4. (Original) The transgenic mouse of claim 1 wherein the human genomic DNA sequence comprises at least one alteration.

5. (Original) The transgenic mouse of claim 4 wherein the alteration comprises at least one mutation.

6. (Original) The transgenic mouse of claim 4 wherein the alteration comprises at least one insertion or at least one deletion.

7. (Original) The transgenic mouse of claim 1 which has a dementing disorder or a neurodegenerative disorder.

8. (Original) The transgenic mouse of claim 1 which accumulates abnormal tau in the cell bodies and dendrites of neurons in the hippocampus, neocortex or brainstem.

9. (Original) The transgenic mouse of claim 1 wherein at least one human tau isoform has an abnormal conformation.

10. (Original) A transgenic mouse, the genome of the cells of which stably comprise a DNA molecule which comprises a human genomic DNA sequence comprising a human tau promoter and which DNA sequence encodes human tau, wherein the DNA sequence is expressed in the transgenic mouse so as to result in the transgenic mouse expressing six isoforms of human tau, wherein the DNA sequence comprises one SrfI restriction site in the human tau coding region, and wherein the ratio of the six isoforms is altered in the transgenic mouse relative to the ratio in humans.

11. (Original) Progeny of the transgenic mouse of claim 1 or 10.

12. (Original) A method for expression of human tau in a mouse, comprising preparing the transgenic mouse of claim 1 or 10.

13. (Original) The method of claim 12 wherein the human genomic DNA sequence comprises at least one alteration.

14. (Original) The method of claim 12 wherein the alteration comprises at least one insertion or at least one deletion.

15. (Original) The method of claim 12 wherein the alteration is associated with a dementing disorder.

16. (Original) The method of claim 12 wherein the alteration is associated a neurodegenerative disorder.

17. (Original) The method of claim 12 wherein the human tau isoform has an abnormal

conformation.

18. (Original) A method of using a transgenic mouse which expresses human tau to screen for an agent that reduces or inhibits a neurodegenerative disorder, comprising:

(a) administering the agent to the transgenic mouse of claim 1; and

(b) determining whether the agent reduces or inhibits a neurodegenerative disorder in the transgenic mouse relative to a transgenic mouse of claim 1 which has not been administered the agent.

19. (Original) A method to screen for an agent that reduces or inhibits abnormal tau formation, comprising:

(a) administering the agent to an organotypic slice culture comprising cells obtained from the brain of the transgenic mouse of claim 1; and

(b) determining whether the agent reduces or inhibits abnormal tau formation in the organotypic slice culture relative to an organotypic slice culture which has not been administered the agent or a corresponding organotypic slice culture comprising cells obtained from the brain of the transgenic mouse of claim 10.

Remarks

Applicant believes the groupings in the Restriction Requirement are in error as claims 8-9 depend on claim 1 and claims 16 and 17 depend on claim 12, and claims 1 and 12 are assigned to Group I. The Examiner is requested to consider that expression of a wild-type tau gene can result in a dementing or neurodegenerative disorder (claim 16), accumulation of abnormal tau (claim 8), and a human tau isoform with an abnormal conformation (claims 9 and 17). Applicant's Representatives respectfully request that if the Restriction Requirement is generally maintained, claims 8-9 and 16-17 be grouped with the claims in Group I.

In response to the Restriction Requirement, Applicant elects, with traverse, the claims in Group I (claims 1-3, 7 and 10-12), directed to a transgenic mouse, the genome of the cells of which stably comprise a DNA molecule which comprises a human genomic DNA sequence comprising a human tau promoter and which DNA sequence encodes human tau, wherein the DNA sequence is expressed in the transgenic mouse so as to result in the transgenic mouse expressing six isoforms of human tau, wherein the transgenic mouse does not express endogenous murine tau, wherein the DNA sequence comprises one SrfI restriction site in the human tau coding region, and wherein the transgenic mouse accumulates filamentous tau in dendrites of hippocampal neurons. Reconsideration and withdrawal of the Restriction Requirement, in view of the remarks herein, is respectfully requested.

The Restriction Requirement is traversed on the basis that the inventions are closely related. Claims directed to a transgenic mouse, the genome of the cells of which stably comprise a DNA molecule which comprises a human genomic DNA sequence comprising a human tau promoter and which DNA sequence encodes human tau, wherein the DNA sequence is expressed in the transgenic mouse so as to result in the transgenic mouse expressing six isoforms of human tau, wherein the transgenic mouse does not express endogenous murine tau, wherein the DNA sequence comprises one SrfI restriction site in the human tau coding region, and wherein the transgenic mouse accumulates filamentous tau in dendrites of hippocampal neurons (claims 1-3, 7 and 10-12; Group I) are clearly related to claims directed to a transgenic mouse, the genome of the cells of which stably comprise a DNA molecule which comprises a human genomic DNA sequence comprising a human tau promoter and which DNA sequence encodes human tau,

wherein the DNA sequence is expressed in the transgenic mouse so as to result in the transgenic mouse expressing six isoforms of human tau, wherein the transgenic mouse does not express endogenous murine tau, wherein the DNA sequence comprises one SrfI restriction site in the human tau coding region, and wherein the transgenic mouse accumulates filamentous tau in dendrites of hippocampal neurons, and wherein the human genomic DNA sequence comprises at least one alteration (claims 4-6, 8-9 and 13-17; Group II); a claim directed to a method of using the transgenic mouse to screen for an agent that reduces or inhibits a neurodegenerative disorder (claim 18; Group III); and a claim directed to a method of using a culture of cells from the transgenic mouse to screen for an agent that reduces or inhibits abnormal tau formation (claim 19; Group IV).

The Restriction Requirement is also traversed on the basis that Restriction Requirements are optional in all cases. M.P.E.P. § 803. If the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it arguably may include claims to distinct or independent inventions. M.P.E.P. § 803. Moreover, it is submitted that Applicant should not be required to incur the additional costs associated with the filing of multiple divisional applications in order to obtain protection for the claimed subject matter. For instance, due to the relatedness of at least the claims in Groups I and II, the claims in Groups I and II can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner. Evidence that the claims in at least Groups I and II can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner is provided in the Restriction Requirement as those claims are in the same class (class 800) and subclasses (subclasses 18 and 21) for search purposes.

Further, as claim 1 links claims in Groups I-IV, claims 1-18 should be examined in the same application. M.P.E.P. 809.

In the event the Examiner does not examine claims 18 and 19 with the claims in Group I, Applicant's Representatives respectfully request rejoinder of claims 18 and 19 (methods of using the transgenic mouse) with the claims in Group I upon a notice of allowance for the claims in Group I. M.P.E.P. 821.04.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KAREN DUFF

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Date March 22, 2006 By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 22 day of March, 2006.

John D. Gustav-Wrathall
Name

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Signature